

Hamilton County WWTA Simplex Grinder Pump Training

Presented by Tom Bruce

Cleveland Grimes,
WWTA Executive Director

Grinder Pump, Tank, and Control Panel
shall be installed in accordance with the

April 27, 2005
STANDARD DETAILS AND SPECIFICATIONS FOR THE
CONSTRUCTION OF SANITARY SEWERS

and in accordance with the

August 10, 2006
INSPECTION NOTIFICATION AND TYPICAL DETAILS FOR
SIMPLEX GRINDER STATION INSTALLATIONS

The Simplex Grinder Pump Station Consists of:

TANK
PUMP
CONTROL PANEL
ALARM FLOAT
DIAPHRAGM SWITCH

TANK with anti flotation ring

5'

2'



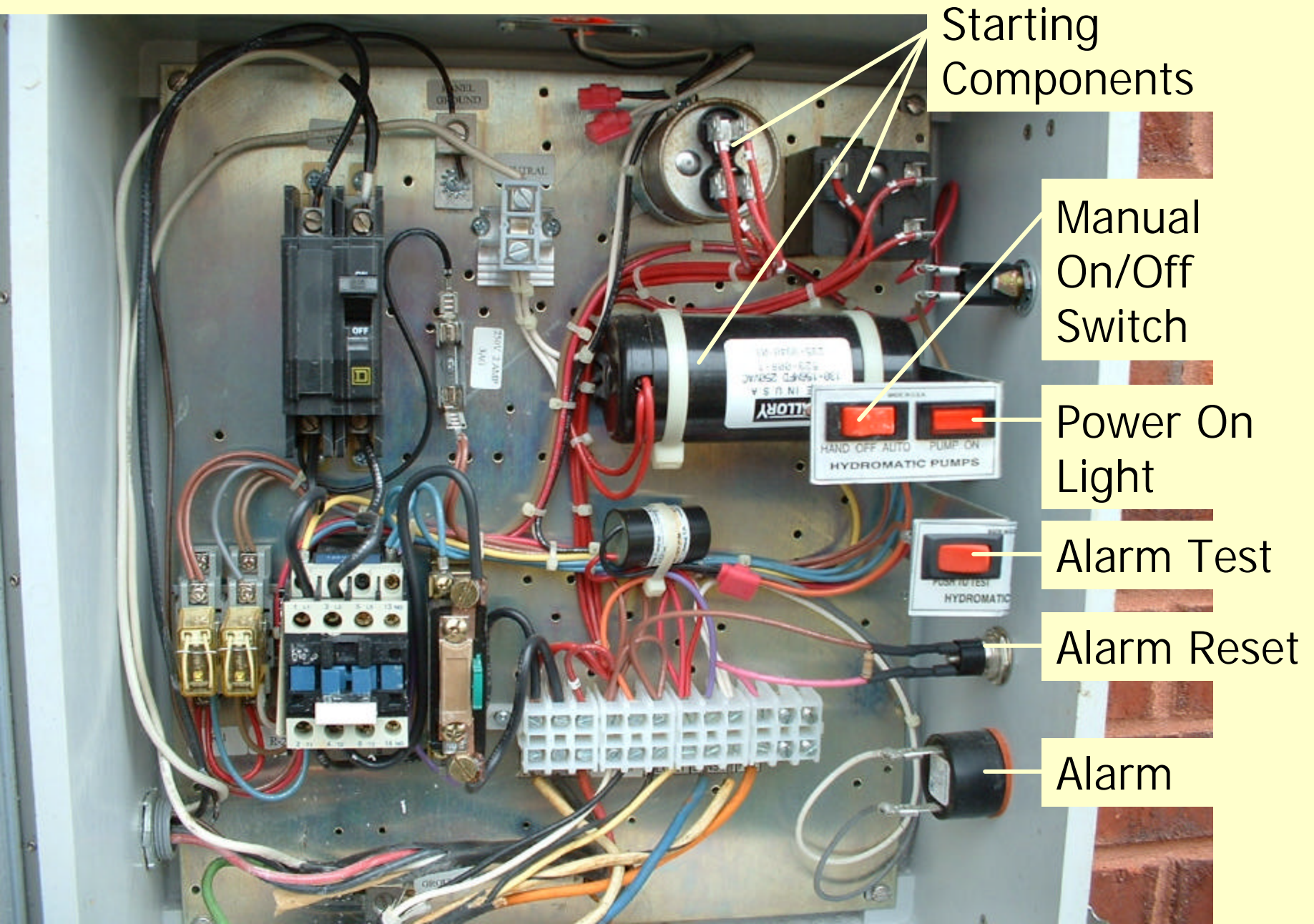
Grinder Tank

- MINIMUM 4" Crushed Stone under basin
- MINIMUM of 10 ft³ (Twelve 80-pound bags)
Ready-Mix Concrete poured around basin
- MINIMUM of 36" of Crushed Stone on top of
Concrete

2-hp
Grinder Pump
with
1 ¼" Discharge



CONTROL PANEL





PVC Float Tree

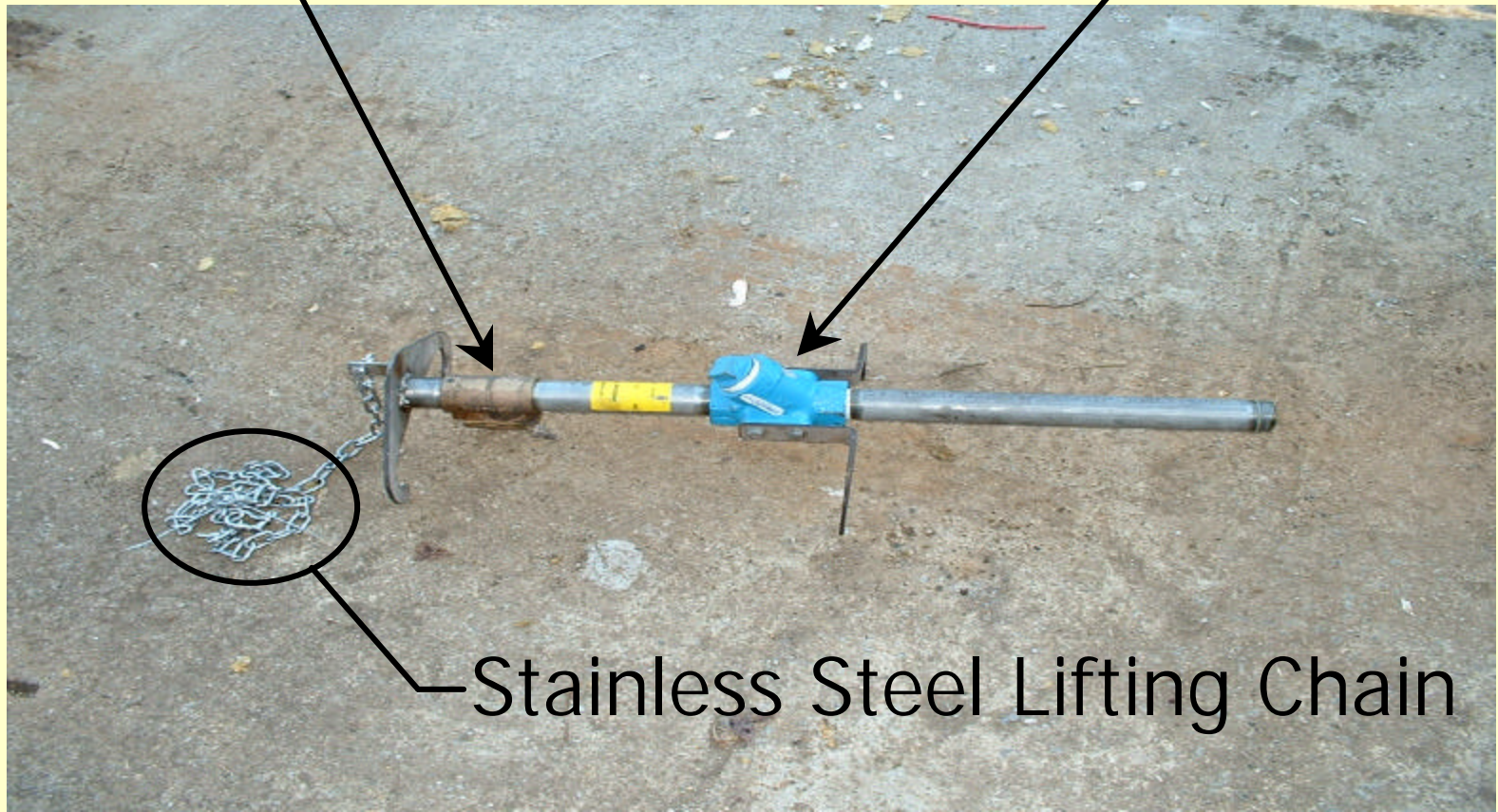
Level Control Pressure Switch Diaphragm

1 ¼" DISCHARGE PIPING

Stainless Steel Guide Assembly Includes:

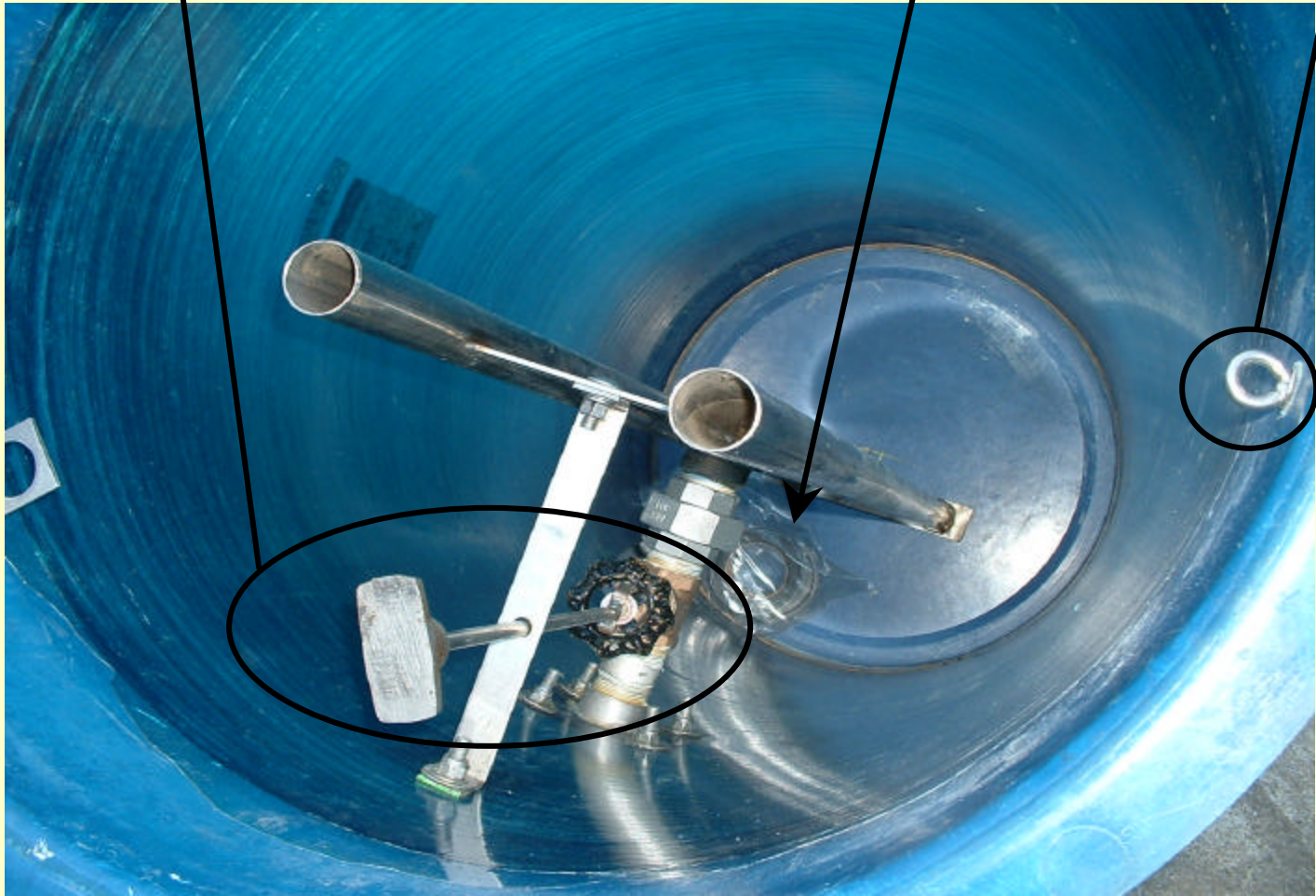
Ball Check Valve

Brass Quick Connect



Stainless Steel Lifting Chain

Stainless Steel Eye Bolts for Alarm Float
Rubber Flange
Brass Gate Valve



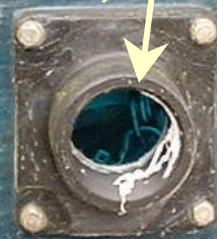
Tank Cover

Electrical Junction Box
(Includes 4 Electrical Connectors)



2" Hub for Electric Conduit Only

(Electric Wires will be in PVC
from Hub to Control Panel)

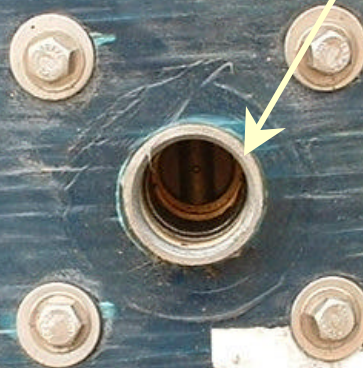


Tank Extension Rings

(6-inch, 12-inch, 18-inch, or 24-inch)



1 1/4" Discharge Flange



WWTA provides a 1 1/2" to
1 1/4" male adaptor

Connection Box

- Located at the Right-Of-Way
- Final Grade must be Flush with Ground
- Contact WWTA if the Connection Box can not be located
- Ball Valve must be opened after Approved Connection

IMPROPER INSTALLATION

Tank Cover
NOT AT GRADE

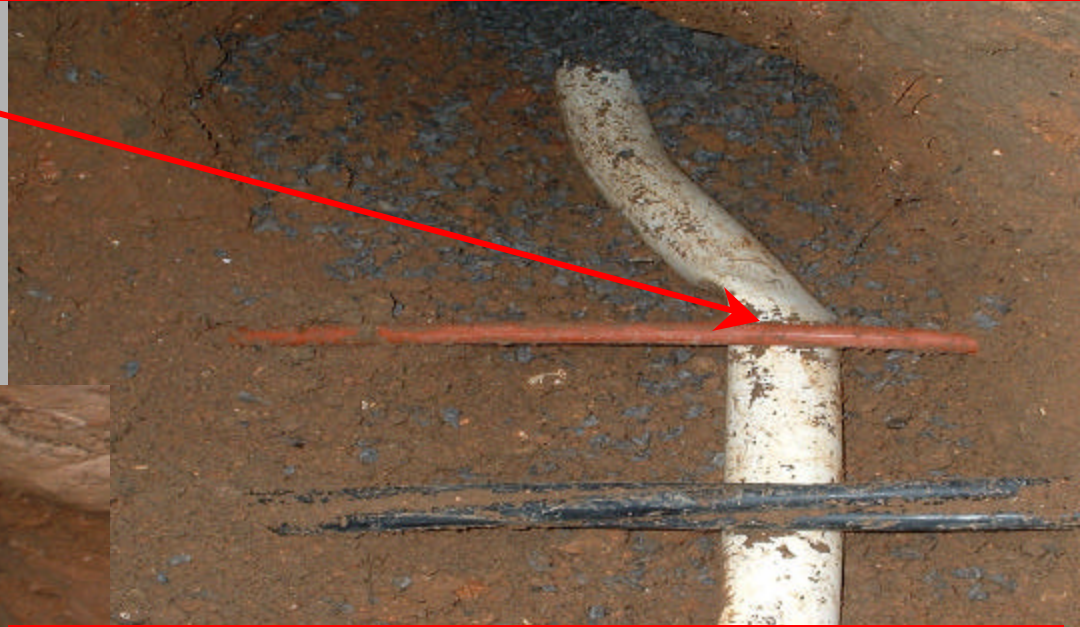
Wires
NOT IN CONDUIT

THE
CONTROL PANEL
IS IN THE HOUSE!



WARRANTY ISSUES

The discharge line was crimped after installation



If we have warranty issues with a Grinder Pump that you install, we will call you to fix it.
If you refuse to fix or repair the problem, we will do it.

And then we will BILL YOU.

Plumber's Notes - See SD-31A

- All Grinder Pumps must be purchased from WWTA if they are to be tied in to a Designed Low Pressure System
- Inlet must be a minimum of 36" from bottom of tank
- Plumbing Discharge Line must be 1 ½" Class 200 SDR-21 PVC pipe with push-on joints
- Fittings may be Push-On Joints or Solvent, Schedule 40
- Discharge Line must have a minimum cover of 24" from final grade

Plumber's Notes - See SD-31A

- Service Connection Box valves must be 16" to 18" below final grade
- Service Connection Box must be 4' minimum from driveway
- Discharge Line under Driveway must be sleeved in 4" Schedule 40 PVC
- Valves must be Schedule 200 true union Spears Valves
- Discharge line shall be bedded 6" below and 6" above with approved stone
- The discharge line trench shall be a minimum of 12" wide
- There shall be no 90° fittings on discharge lines

Electrician's Notes – See SD-30

- The Grinder Pump wire, Diaphragm Pressure Switch wire, and Float Switch wire shall go through the "J" Box on the Fiberglass Cover
- The Grinder Pump wire shall be spliced inside the "J" Box, but if the Diaphragm Pressure Switch wire and Float Switch wire are long enough to reach the Control Panel, they do not have to be spliced
- The Diaphragm Pressure Switch has a $\frac{1}{8}$ " Vent Tube with 2 Control Wires
- The Diaphragm Pressure Switch Vent Tube shall extend to the top of the Control Panel

Electrician's Notes – See SD-30

- Lay the Tank Cover on the ground about 1' from the Grinder Tank and THEN cut and splice the wires inside the "J" Box
- All connections in the "J" Box and the Control Panel shall comply with HC Building Inspection, NEC, and Local Codes
- Installation requires an ELECTRICAL PERMIT and TAP-ON PERMIT
- Final inspection to be performed by the WWTA by appointment only

Grinder Pumps connecting to a WWTA Sewer
Must be Purchased from the WWTA at:

1250 Market Street, Suite 3050
Chattanooga, TN 37402

Phone Number (423)209-7842

Grinder Pumps will be picked up

By Appointment Only.

To make an appointment -
call

Bill at 315-3835

or

Paul at 315-3843

1018 Yale St.
East Ridge, TN 37412

Call 209-7842 for INSPECTION

Inspection #1 – PLUMBING

Tank has been set and discharge line has been installed and connected.

Tank has NOT been COVERED.

Plumber and WWTA must be present.

Inspection #2 – ELECTRICAL

Control Panel and Pump are completely wired.

Disconnect and Control Panel are set and supplied with power (permanent or temporary).

Grinder Pump System and Discharge Lines will be tested according to SD-31A.

Plumber, Electrician, and WWTA must be present.